OBJECTIVES: To assess and compare the efficacy of atropine and atropine with glycopyrrolate combination in organophosphate poisoning. **METHODS:** A retrospective study was conducted in a tertiary care teaching hospital of South India. Data was collected retrospectively from medical record section from 2012 to 2013 in a suitable designed case record form. Data was analysed by using SPSS 20.0 with chi-square and one way anova. **RESULTS:** Total of 199 cases of organophosphate poisoning was documented out of which 135(67.8%) were males and 64(32.2%) were females. The average age in this group of patients was found to be 34.22 + 14.26. The average pre-hospitalization period was 1.58 + 2.07 days. Among them majority of the cases were suicidal (94.5%). A total of 159 patients received only atropine as treatment with an average hospital stay of 12.66 (SD= 11.88) days and a mean of 8.71(SD= 10.03) days duration in ICU. Whereas the other 40 patients received both atropine and glycopyrrolate as treatment with an average stay of 15.68 (SD=12.76) days and a mean of 12.12 (SD=10.40) days duration in ICU. Amongst the 159 patients who received only atropine 40.9% received ventilation and for the other 40 who received atropine and gylcopyrrolate only 60% received ventilation. Out of the 159 patients who received only atropine 7.6% underwent tracheostomy and 25.8% were found to have intermediate syndrome, whereas for patients who received both atropine and glycopyrrolate 15.4% underwent tracheostomy and 35% were found to have intermediate syndrome. **CONCLUSIONS:** Efficacy of two regimens reveals that atropine was found to be more effective when given alone when compared with atropine and glycopyrrolate combination in OP poisoning.

PIH7

THE EFFECTIVENESS OF FIRST TRIMESTER COMBINED SCREENING ON REDUCING THE RATE OF INVASIVE GENETIC PROCEDURES IN A CITY BASED POPULATION OF HUNGARY 2010-2013

Nagy S[1], Bajnoczky K[1], Boncz I[2], Kovács G[3]

[1]*Petz Aladár County Teaching Hospital, Győr, Hungary,* [2]*University of Pécs, Pécs, Hungary,* [3]*Széchenyi István University, Győr, Hungary*

OBJECTIVES: To assess the effectiveness of combined biochemical and ultrasound screening for chromosomal abnormalities in the first trimester of pregnancy on reducing the rate of invasive genetic procedures in a city based population on Hungary. **METHODS:** Previously women aged 35 years or more had access to chorionic villus sampling (CVS) or amniocentesis (AC). A private prenatal diagnostic center offered a population based screening protocol irrespective of maternal age. Invasive testing was performed for women having a combined risk for fetal aneuploidy> 1:250. Total number of 4611 singleton and twin pregnancies in the gestational age of 11+0 and 13+6 weeks were enrolled between November 2010 and August 2013. Maternal serum level of pregnancy associated protein-A (PAPP-A) and free-beta human chorionic gonadotropin (free β-hCG) were determined by KRYPTOR (Brahms-Thermofisher Gmbh, Germany). **RESULTS:** The screening rate in this city based population was 60%. 277 (6,3%) women had a positive first trimester screening result. There were 16 fetuses with Down's syndrome and 14 fetuses with other chormosomal abnormalities diagnosed. The sensitivity and specificity were 100% and 95%, the false positive rate was 4,5% and the false negative rate was 0%. The positive predictive value of the test was 11%, the negative predictive value was 100%. The number of pregnancies in which an invasive test was performed decreased from 518 in 2005 to 295 in 2013, or by 44%. The proportion of women aged less than 35 years increased, while the rate of women over 35 decreased in this invasive group. **CONCLUSIONS:** It is possible to change the pattern of invasive prenatal procedures and reduce the proportion of women having CVS or amnio. Efficient information is needed to increase the screening rate, especially in a self-financed system, where the public health insurance does not cover this type of nationwide screening.

PIH8

BURDEN OF DISEASE IN ASIAN COUNTRIES AND THE USE OF DISABILITY-ADJUSTED LIFE-YEARS AND QUALITY-ADJUSTED LIFE-YEARS

Groom ZC[1], Beale RC[1], Brooks-Rooney C[2]

[1]*Costello Medical Consulting Ltd., Cambridge, UK,* [2]*Costello Medical Singapore Pte Ltd., Singapore*

OBJECTIVES: Disability-adjusted Life-years (DALYs) and Quality-adjusted Life-years (QALYs) are two measurements commonly used in health care evaluations; however the specific disease areas where they are most applicable are not fully defined. The objective of this study was to review the use of DALYs and QALYs in trials taking place in China and Thailand and review the relationship with disease burden. **METHODS:** PubMed was searched for studies published after 01/01/2004 reporting DALYs and QALYs for communicable and non-communicable diseases in China and Thailand. Data on disease burden were obtained from the World Health Organisation's (WHO) 'Mortality and Burden of Disease Estimates for WHO Member States in 2004' database. **RESULTS:** 117 studies were included for China; 79 reported QALYs and 38 reported DALYs. 34 studies were included for Thailand (QALYs: 28; DALYs: 6). Of trials reporting QALYs, 74.7% of Chinese and 78.6% of Thai trials focussed on non-communicable disease; the most commonly investigated disease was cancer. Of trials reporting DALYs, 44.7% of Chinese and 16.7% of Thai trials focussed on non-communicable diseases. In terms of the disease burden, communicable/non-communicable diseases account for 24.6%/75.4% and 33.7%/66.3% of the burden in China and Thailand respectively. Leading causes of disease burden were cerebrovascular disease (7.7%) and HIV (12.0%) in China and Thailand respectively. **CONCLUSIONS:** A dual burden of disease was observed in Asian countries in terms of non-communicable/communicable diseases. The QALY was the preferred measure for non-communicable diseases in China and Thailand. While the DALY is used equally in communicable and non-communicable diseases in China, it is used predominantly for non-communicable diseases in Thailand. This presents a challenge to health care managers; while it is clear that QALY is used mostly for non-communicable diseases, the most appropriate use of the DALY is unclear. Further research into the characteristics of diseases within these categories is required.

INDIVIDUAL'S HEALTH – Cost Studies

PIH10

USING HORMONAL CONTRACEPTION REDUCE UNINTENDED PREGNANCY IN CHINA

Tang M, Mao Y, Chen Y

Fudan University, Shanghai, China

OBJECTIVES: The potential high-unintended pregnancy rates have resulted in great productivity loss in China. Several contraceptive methods have been introduced by both the providers and the woman themselves to reduce the unintended pregnancy rates.A cost-benefit analysis on various hormonal contraceptive methods was performed in order to provide references for contraception selection in China. **METHODS:** A decision-tree model was used to compare contraception costs and effects among different contraceptive methods. All women were classified into three contraception profiles (continuation, discontinuation and switch, discontinuation and drop-out).Outcomes included no pregnancy, pregnancy with no birth and birth. All the probabilities, medical and medication data in this model were derived from the literature and interviews. **RESULTS:** A comparison of total estimated yearly and cumulative costs indicated that contraceptive implants, transdermal contraceptive, extended-cycle OC, vaginal ring, and IUD were less costly, less than $281733.7 in a three-year study period. While transdermal contraceptive, extended-cycle OC and vaginal ring were not available in the Chinese market, contraceptive implants and IUD were the only two choices in China with lowest cumulative costs. The further cost-benefit analysis also demonstrated contraceptive implants as good value for money. Using contraceptive implants were proved to have the lowest cost of pregnancy from failure of $839.9, with a total cost of $26814.9, and a benefit-cost ratio of 2.2, far over 1.0. Sensitivity analysis by tornado diagrams showed that cost of pregnancies, age and proportion of discontinuation and switch might have the greatest impact on the costs and failure risks of contraceptive implants. **CONCLUSIONS:** In order to reduce the unintended pregnancy rates, the implementation of hormonal contraception may lead to a benefit in terms of both costs and effects. And among all the hormonal contraception in the Chinese market, contraceptive implants tend to generate greater economic benefits. Note:1US dollar=6.46 Chinese yuan.

PIH11

DISEASE BURDEN OF UNINTENDED PREGNANCY IN CHINA

Mao Y[1], Tang M[1], Chen Y[1], Wu S[2]

[1]*Fudan University, Shanghai, China,* [2]*National Research Institute for Family Planning, Beijing, China*

OBJECTIVES: China is a big country with a large population. Reproductive health education is not sufficient for women of childbearing age, which leads to high unintended pregnancy (UP) rate.These represent a significant cost to the health care system. This study analyzes the epidemiology and productivity loss of unintended pregnancy in China. **METHODS:** The study reviewed published scientific articles and policy documents related to unintended pregnancy in China. We retrieved literature from Wanfang and PubMed databases, and searched policy documents in websites of National Bureau of Statistics and National Center for Women and Children's health, China CDC. **RESULTS:** Almost 10% of fertile women have UP in China each year. There are four different results of UP, including miscarriage, elective abortion, ectopic pregnancy and delivery. There are two methods of elective abortion, including operation abortion and drug abortion. The costs of operation and drug abortion are about US $131.58 and $100.62 in early pregnancy respectively, and $154.80 and $464.40 in the second trimester respectively. Drug abortion costs are much more in the second trimester because of complications. The incidence of ectopic pregnancy is about 4.4%, and there are three therapeutic methods. The costs of laparoscopic operation and open abdominal surgery are more than drug conservative treatment. The costs are between $309.60 and $1393.19. Delivery has three possibilities. Vaginal delivery accounted for 52.6%, and cesarean section accounted for 46.2%. The incidence of premature birth is about 6.36%. Vaginal delivery and cesarean section will cost about $387.00 and $619.20 respectively. The costs of premature birth range from $928.80 to $1547.99, and the costs will be increased with high likelihood of neonatal weight. **CONCLUSIONS:** UP poses a heavy economic burden in China, but the economic burden could be reduced if fertile women receive more reproductive health education, get appropriate treatment and have periodical prenatal examination.

PIH12

AN UPDATE OF COST-EFFECTIVENESS OF ROTAVIRUS VACCINATION IN INDONESIA: TAKING A BIRTH-DOSE VACCINATION STRATEGY INTO ACCOUNT

Suwantika AA[1], Setiawan D[2], Atthobari J[3], Postma MJ[1]

[1]*University of Groningen, Groningen, The Netherlands,* [2]*University of Groningen, Groningen, The Netherlands,* [3]*Gadjah Mada University, Yogyakarta, Indonesia*

OBJECTIVES: Rotavirus infection was reported as the major cause of severe diarrhea in children under 5-years-old in Indonesia. A low cost rotavirus vaccine to protect infants from birth has been developed for developing countries, such as Indonesia. This study aims to update our initial analysis on the cost-effectiveness of rotavirus vaccination in Indonesia, taking a birth-dose vaccination strategy explicitly into account. **METHODS:** An age-structured cohort model was developed for the 2013 Indonesia birth cohort. Applying different rotavirus vaccine efficacies for formula-fed and breastfed infants, we compared two vaccination strategies: (i) three-dose schedule at 2, 3 and 4 months of age, and (ii) three-dose schedule at 0, 1, and 2 months of age. We applied a 5-year-time-horizon with 1 monthly analytical cycles for children less than 1 year of age and annually thereafter. Also, we used Monte Carlo simulations to examine the economic acceptability and affordability of the rotavirus vaccination. **RESULTS:** Rotavirus vaccination would reduce rotavirus-diarrhea cases in children under 5-years-old by 475,806 and 489,259 cases for the first and second strategies, respectively. Considering amarket price of US$ 5 per dose, the Indonesian government would require budgets of US$ 65.0 million and US$ 65.3 million for the first and second strategies, respectively.The incremental cost-effectiveness ratios wereUS$ 150 and US$ 146for